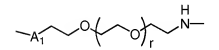


Amendments to the Claims

CLAIMS

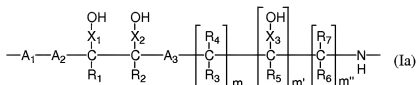
1. (currently amended) ~~A~~ An affinity resin obtained by polymerizing a starting material monomer, wherein the monomer ~~is a (meth)acrylic monomer and incorporates~~ comprises a hydrophilic spacer having at least one partial structure represented by the formula (Ie)



wherein with respect to (Ie), A₁ is -O- or -NH-, and r is an integer of 1 to 10, and wherein a ligand is optionally immobilized on the resin.

2. (canceled).

3. (withdrawn) The resin of claim 1, wherein the hydrophilic spacer has the at least one partial structure represented by any one formula selected from the group consisting of the formula (Ie) following formulas (Ia) to (Ie):



wherein with respect to (Ia),

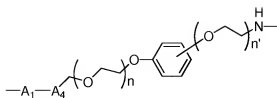
A₁ is -O- or -NH-, A₂ is a single bond or a lower alkylene group, A₃ is an appropriate joining group,

each of X₁ to X₃, whether identical or not, is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R₁ to R₇, whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms, -CH₂OH or a hydroxyl group,

m is an integer of 0 to 2, m' is an integer of 0 to 10, m'' is an integer of 0 to 2,

when a plurality of R₃ to R₇ units exist, they may be identical or not, and when a plurality of X₃ units exist, they may be identical or not;

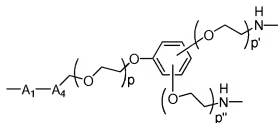


(Ib)

wherein with respect to (Ib),

A₁ is -O- or -NH-, A₄ is a lower alkylene group, and

each of n and n', whether identical or not, is an integer of 1 to 10;

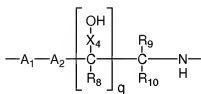


(Ic)

wherein with respect to (Ic),

A₁ is -O- or -NH-, A₄ is a lower alkylene group, and

each of p, p' and p'', whether identical or not, is an integer of 1 to 10;



(Id)

wherein with respect to (Id),

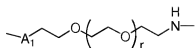
A₁ is -O- or -NH-, A₂ is a single bond or a lower alkylene group,

X₄ is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R₈ to R₁₀, whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms,

-CH₂OH or a hydroxyl group,

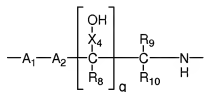
q is an integer of 1 to 7, when a plurality of R₈ units exist, they may be identical or not, and when a plurality of X₄ units exist, they may be identical or not;



(Ic)

wherein with respect to (Ic), A_1 is -O- or -NH-, and r is an integer of 1 to 10.

4. (withdrawn) The resin of claim 3, wherein the hydrophilic spacer has at least one partial structure represented by the following formula (Id):



wherein in the formula (Id),

A_1 is -O- or -NH-, A_2 is a single bond or a lower alkylene group,

X_4 is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R_8 to R_{10} , whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms,

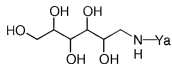
-CH₂OH or a hydroxyl group,

q is an integer of 1 to 7,

when a plurality of R_8 units exist, they may be identical or not, and when a plurality of X_4 units exist, they may be identical or not.

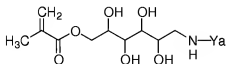
5. (withdrawn) The resin of claim 4, wherein in the formula (Id), A_1 is -O-, A_2 is a methylene group, X_4 is a single bond, q is 4, the plurality of R_8 units are identically hydrogen atoms, and R_9 and R_{10} are hydrogen atoms.

6. (withdrawn) The resin of claim 1, wherein the hydrophilic spacer is a compound represented by the formula shown below:



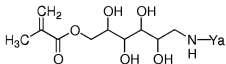
wherein Ya is a hydrogen atom or an amino-group-protecting group.

7. (withdrawn) The resin of claim 5, which comprises a copolymer of a compound represented by the formula shown below:



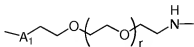
wherein Ya is a hydrogen atom or an amino-group-protecting group.

8. (withdrawn) A compound represented by the formula shown below:



wherein Ya is a hydrogen atom or an amino-group-protecting group.

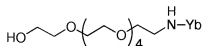
9. (withdrawn) The resin of claim 3, wherein the hydrophilic spacer has at least one partial structure represented by the following formula (Ie):



wherein in the formula (Ie), A₁ is -O- or -NH-, and r is an integer of 1 to 10.

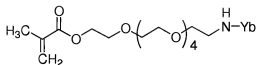
10. (currently amended) The resin of ~~claim 9~~ claim 1, wherein in the formula (Ie), A₁ is -O-.

11. (previously presented) The resin of claim 1, wherein the hydrophilic spacer is a compound represented by the formula shown below:



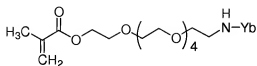
wherein Yb is a hydrogen atom or an amino-group-protecting group.

12. (previously presented) The resin of claim 10, which comprises a copolymer of a compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

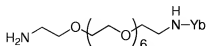
13. (withdrawn) A compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

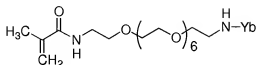
14. (withdrawn) The resin of claim 9, wherein in the formula (Ic), A₁ is -NH-.

15. (withdrawn) The resin of claim 1, wherein the hydrophilic spacer is a compound represented by the formula shown below:



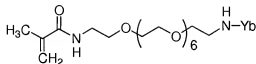
wherein Yb is a hydrogen atom or an amino-group-protecting group.

16. (withdrawn) The resin of claim 14, which comprises a copolymer of a compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

17. (withdrawn) A compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

18. (canceled)

19. (canceled)

20. (withdrawn) A screening method for a target molecule, which interacts specifically with a ligand, which method comprises:

(i) immobilizing a ligand to a resin obtained by polymerizing a starting material monomer, wherein the monomer incorporates a hydrophilic spacer,

(ii) contacting the ligand-immobilized resin obtained in (i), with a sample, which may or may not comprise the target molecule,

(iii) identifying and/or analyzing a molecule, which interacts specifically or does not interact specifically with the ligand, and

(iv) judging the molecule that interacts specifically with the ligand to be a target molecule.

21. (withdrawn) A method of measuring a target molecule, which interacts specifically with a ligand in a sample, which method comprises:

(i) immobilizing a ligand to a resin obtained by polymerizing a starting material monomer, wherein the monomer incorporates a hydrophilic spacer,

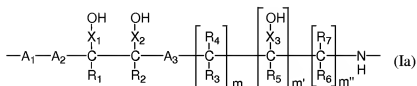
(ii) contacting the ligand-immobilized resin obtained in (i) with a sample,

(iii) measuring and/or analyzing a molecule, which interacts specifically or does not interact specifically with the ligand, and

(iv) measuring a target molecule, which interacts specifically with the ligand.

22. (withdrawn) The screening method of claim 20, wherein the monomer is a (meth)acrylic monomer.

23. (withdrawn) The screening method of claim 20, wherein the hydrophilic spacer has at least one partial structure represented by any one formula selected from the group consisting of the following formulas (Ia) to (Ie):



wherein with respect to (Ia),

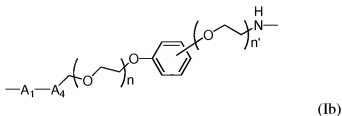
A₁ is -O- or -NH-, A₂ is a single bond or a lower alkylene group, A₃ is an appropriate joining group,

each of X₁ to X₃, whether identical or not, is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R₁ to R₇, whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms, -CH₂OH or a hydroxyl group,

m is an integer of 0 to 2, m' is an integer of 0 to 10, m'' is an integer of 0 to 2,

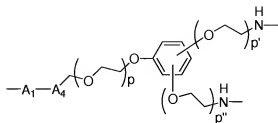
when a plurality of R₃ to R₇ units exist, they may be identical or not, and when a plurality of X₃ units exist, they may be identical or not;



wherein with respect to (Ib),

A₁ is -O- or -NH-, A₄ is a lower alkylene group, and

each of n and n', whether identical or not, is an integer of 1 to 10;

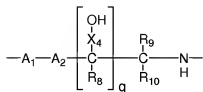


(Ic)

wherein with respect to (Ic),

A₁ is -O- or -NH-, A₄ is a lower alkylene group, and

each of p, p' and p'', whether identical or not, is an integer of 1 to 10;



(Id)

wherein with respect to (Id),

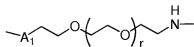
A₁ is -O- or -NH-, A₂ is a single bond or a lower alkylene group,

X₄ is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R₈ to R₁₀, whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms,

-CH₂OH or a hydroxyl group,

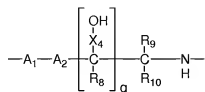
q is an integer of 1 to 7, when a plurality of R₈ units exist, they may be identical or not, and when a plurality of X₄ units exist, they may be identical or not;



(Ie)

wherein with respect to (Ie), A₁ is -O- or -NH-, and r is an integer of 1 to 10.

24. (withdrawn) The screening method of claim 23, wherein the hydrophilic spacer has at least one partial structure represented by the following formula (Id):



(Id)

wherein in the formula (Id),

A₁ is -O- or -NH-, A₂ is a single bond or a lower alkylene group,

X₄ is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R₈ to R₁₀, whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms,

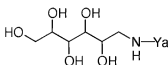
-CH₂OH or a hydroxyl group,

q is an integer of 1 to 7,

when a plurality of R₈ units exist, they may be identical or not, and when a plurality of X₄ units exist, they may be identical or not.

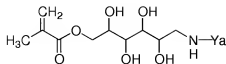
25. (withdrawn) The screening method of claim 24, wherein in the formula (Id), A₁ is -O-, A₂ is a methylene group, X₄ is a single bond, q is 4, the plurality of R₈ units are identically hydrogen atoms, and R₉ and R₁₀ are hydrogen atoms.

26. (withdrawn) The screening method of claim 20, wherein the hydrophilic spacer is a compound represented by the formula shown below:



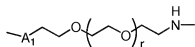
wherein Y_a is a hydrogen atom or an amino-group-protecting group.

27. (withdrawn) The screening method of claim 25, which comprises a copolymer of a compound represented by the formula shown below:



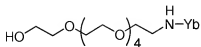
wherein Ya is a hydrogen atom or an amino-group-protecting group.

28. (withdrawn) The screening method of claim 23, wherein the hydrophilic spacer has at least one partial structure represented by the following formula (Ic):



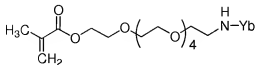
wherein in the formula (Ic), A₁ is -O- or -NH-, and r is an integer of 1 to 10.

29. (withdrawn) The screening method of claim 28, wherein in the formula (Ic), A₁ is -O-.
30. (withdrawn) The screening method of claim 20, wherein the hydrophilic spacer is a compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

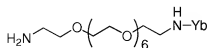
31. (withdrawn) The screening method of claim 29, which comprises a copolymer of a compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

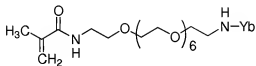
32. (withdrawn) The screening method of claim 28, wherein in the formula (Ic), A₁ is -NH-.

33. (withdrawn) The screening method of claim 20, wherein the hydrophilic spacer is a compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

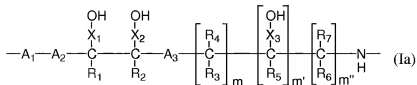
34. (withdrawn) The screening method of claim 32, which comprises a copolymer of a compound represented by the formula shown below:



wherein Yb is a hydrogen atom or an amino-group-protecting group.

35. (withdrawn) The method of measuring of claim 21, wherein the monomer is a (meth)acrylic monomer.

36. (withdrawn) The method of measuring of claim 21, wherein the hydrophilic spacer has at least one partial structure represented by any one formula selected from the group consisting of the following formulas (Ia) to (Ie):



wherein with respect to (Ia),

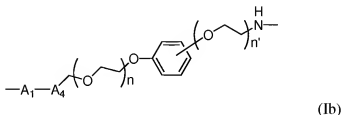
A₁ is -O- or -NH-, A₂ is a single bond or a lower alkylene group, A₃ is an appropriate joining group,

each of X₁ to X₃, whether identical or not, is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R₁ to R₇, whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms, -CH₂OH or a hydroxyl group,

m is an integer of 0 to 2, m' is an integer of 0 to 10, m'' is an integer of 0 to 2,

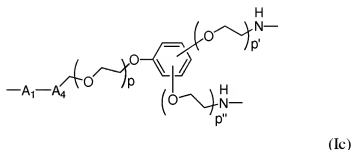
when a plurality of R₃ to R₇ units exist, they may be identical or not, and when a plurality of X₃ units exist, they may be identical or not;



wherein with respect to (Ib),

A₁ is -O- or -NH-, A₄ is a lower alkylene group, and

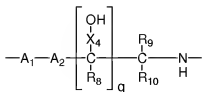
each of n and n', whether identical or not, is an integer of 1 to 10;



wherein with respect to (Ic),

A₁ is -O- or -NH-, A₄ is a lower alkylene group, and

each of p, p' and p'', whether identical or not, is an integer of 1 to 10;



wherein with respect to (Id),

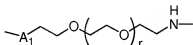
A₁ is -O- or -NH-, A₂ is a single bond or a lower alkylene group,

X₄ is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R_8 to R_{10} , whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms,

$-\text{CH}_2\text{OH}$ or a hydroxyl group,

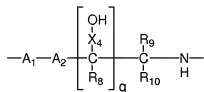
q is an integer of 1 to 7, when a plurality of R_8 units exist, they may be identical or not, and when a plurality of X_4 units exist, they may be identical or not;



(Ic)

wherein with respect to (Ic), A_1 is $-\text{O}-$ or $-\text{NH}-$, and r is an integer of 1 to 10.

37. (withdrawn) The method of measuring of claim 36, wherein the hydrophilic spacer has at least one partial structure represented by the following formula (Id):



wherein in the formula (Id),

A_1 is $-\text{O}-$ or $-\text{NH}-$, A_2 is a single bond or a lower alkylene group,

X_4 is a single bond or a methylene group optionally substituted by a linear or branched alkyl group having 1 to 3 carbon atoms,

each of R_8 to R_{10} , whether identical or not, is a hydrogen atom, a linear or branched alkyl group having 1 to 3 carbon atoms,

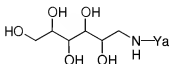
$-\text{CH}_2\text{OH}$ or a hydroxyl group,

q is an integer of 1 to 7,

when a plurality of R_8 units exist, they may be identical or not, and when a plurality of X_4 units exist, they may be identical or not.

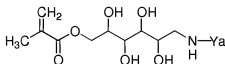
38. (withdrawn) The method of measuring of claim 37, wherein in the formula (Id), A_1 is $-\text{O}-$, A_2 is a methylene group, X_4 is a single bond, q is 4, the plurality of R_8 units are identically hydrogen atoms, and R_9 and R_{10} are hydrogen atoms.

39. (withdrawn) The method of measuring of claim 21, wherein the hydrophilic spacer is a compound represented by the formula shown below:



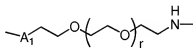
wherein Ya is a hydrogen atom or an amino-group-protecting group.

40. (withdrawn) The method of measuring of claim 38, which comprises a copolymer of a compound represented by the formula shown below:



wherein Ya is a hydrogen atom or an amino-group-protecting group.

41. (withdrawn) The method of measuring of claim 36, wherein the hydrophilic spacer has at least one partial structure represented by the following formula (Ic):



(Ic)

wherein in the formula (Ic), A₁ is -O- or -NH-, and r is an integer of 1 to 10.

42. (withdrawn) The method of measuring of claim 41, wherein in the formula (Ic), A₁ is -O-.
43. (withdrawn) The method of measuring of claim 21, wherein the hydrophilic spacer is a compound represented by the formula shown below:

